

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 H02G7/14 H02G7/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 H02G

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)  
EPO-Internal, PAJ, WPI Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	PATENT ABSTRACTS OF JAPAN vol. 2002, no. 10, 10 October 2002 (2002-10-10) & JP 2002 176901 A (MEISHIN DENKI KK), 25 June 2002 (2002-06-25) abstract ----- A PATENT ABSTRACTS OF JAPAN vol. 2000, no. 22, 9 March 2001 (2001-03-09) & JP 2001 128345 A (MEISHIN DENKI KK), 11 May 2001 (2001-05-11) abstract ----- X ----- -/-	1,13,15, 19,22, 24,36, 40-43, 46,47 1,5,19, 44,45 28,32



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

## \* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
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- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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- \*&\* document member of the same patent family

Date of the actual completion of the international search

21 October 2004

Date of mailing of the international search report

08/11/2004

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	PATENT ABSTRACTS OF JAPAN vol. 2000, no. 09, 13 October 2000 (2000-10-13) & JP 2000 166455 A (TSUMURA MASAYOSHI), 20 June 2000 (2000-06-20) abstract -----	1, 4, 19, 36
X		28, 31
A	PATENT ABSTRACTS OF JAPAN vol. 2002, no. 06, 4 June 2002 (2002-06-04) & JP 2002 034427 A (BK KK), 5 February 2002 (2002-02-05) abstract -----	1, 3, 36
X		28, 30
A	WO 81/01786 A (HEIJNIS R) 9 July 1981 (1981-07-09) page 3, line 12 - line 22; figures 1,2 -----	1, 4, 31, 36
A	US 5 425 328 A (LARUMBE FERNANDO M) 20 June 1995 (1995-06-20) abstract; figures 1-5 -----	1, 3, 4, 19, 36, 39
A	US 4 597 357 A (LEMESSURIER DAVID H) 1 July 1986 (1986-07-01) abstract; figures 1-4 -----	1, 3-5
X		28, 31, 32
A	GB M23568A (MALCOLM JAMES ARATOON ; HUME GEORGE WEDDERBURN (GB); OWEN CHARLES MAYN) 9 October 1913 (1913-10-09) the whole document -----	1, 3-5
X		28, 31, 32

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No  
PCT/ZA 03/00190

Patent document cited in search report	Publication date	Patent family member(s)		Publication date
JP 2002176901	A 25-06-2002	NONE		
JP 2001128345	A 11-05-2001	NONE		
JP 2000166455	A 20-06-2000	NONE		
JP 2002034427	A 05-02-2002	NONE		
WO 8101786	A 09-07-1981	WO 8101786 A1		09-07-1981
US 5425328	A 20-06-1995	ES 2048651 A2 AT 158900 T CA 2097769 A1 DE 69314229 D1 EP 0573382 A1		16-03-1994 15-10-1997 06-12-1993 06-11-1997 08-12-1993
US 4597357	A 01-07-1986	ZA 8408799 A		26-06-1985
GB 191223568	A 09-10-1913	NONE		